

“Revolution in Training”



Executive Review of Navy Training

August 8, 2001

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Finally, the Navy must expand its research and development (R&D) program in these areas. R&D is needed to develop human-performance models to support the derivation of human requirements early in system development, and to expand the development of tools designed for the warfighter. This is especially true where these elements support workload reduction and the interaction of humans with automation. R&D is particularly needed in developing tools, methods, and data associated with integrating humans into networked systems, developing interfaces for total systems and force-level information management, and providing techniques for knowledge generation and dissemination. R&D is needed to develop advanced techniques for applying simulation to Navy systems, including engineering, test and evaluation, operational, and training simulation. Additional training R&D is needed to develop training technology applications, such as embedded, integrated, or organic trainers, simulators, stimulators, intelligent tutoring, virtual environments for high-fidelity training, automated authoring of instructional materials, and team training techniques.

Recommendation #4: Establish a Lifelong Learning Continuum

The Navy must establish a continuum of lifelong learning and personal and professional development. This is the thread that unifies numerous individual projects and initiatives into a single, unifying concept that unequivocally proclaims the Navy's commitment to its Sailors. This is a Total Force continuum, a philosophy that can be applied equally well to Officers and Enlisted, reserve and active. It must improve Sailor performance, recognizing that human capital is a highly perishable and (sometimes) underutilized resource. This continuum must address and eliminate the inefficiencies and dissatisfiers that we identified earlier in this report. It must capitalize on the Navy Learning Model, the 4-quadrant Human Performance System Model, the alignment of training organizations, and the acquisition recommendations outlined earlier in this report. How then do all these organizational processes and tools fit together?

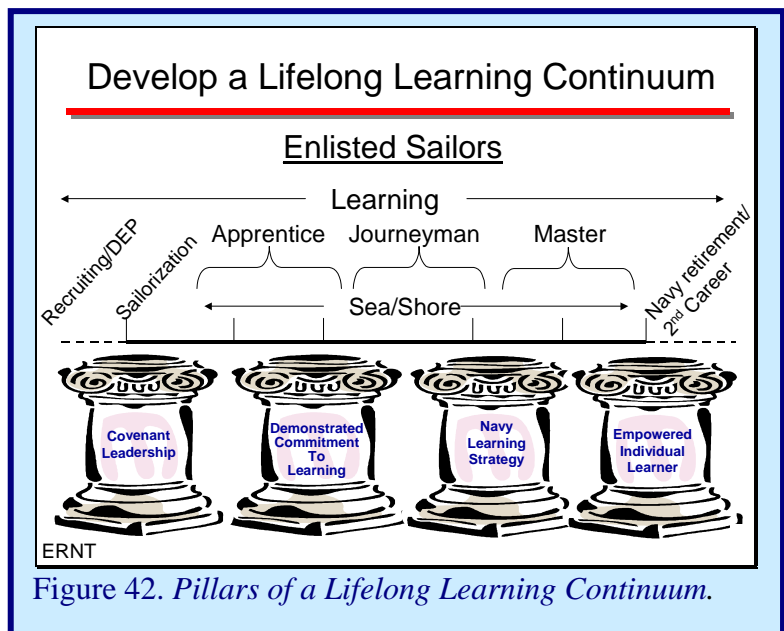


Figure 42. *Pillars of a Lifelong Learning Continuum.*

Overarching Principles

Our discovery efforts have convinced us that four major principles must define the Navy's commitment to lifelong learning and personal and professional development. We characterize these as the pillars of the continuum depicted in figure 42. These fundamental principles are *Covenant Leadership*, a *Demonstrated Commitment to Learning*, a *Navy Learning Strategy*, and an *Empowered Individual Learner*. Together, these values will shift the Navy's culture toward Sailor-centricity. We feel the resultant organization will embrace learner advocacy, be self-renewing, promote reverence for knowledge and knowledge providers, use the science of learning, and be inspirational to the individual Sailor.

It is important for the Navy to embrace this concept—principally for the explicit signal it will send to the Sailors.

We feel the embrace of the continuum should begin the moment a recruit signs an enlistment contract and commits to the Navy; it should begin the moment an officer candidate takes his or her oath; it should continue throughout his or her career and into retirement. Since we will emphasize the Enlisted continuum here, we define the Sailor’s career using the widely accepted skill competency constructs of journeyman, apprentice, and master levels. We feel the continuum should, to a large degree, include Sailors’ families; the support team whose members have also implicitly signed on to serve their nation.

Covenant Leadership

Generally speaking, the Navy has benefited from Sailors who had a “sacred” view of a military career, of patriotic service to country. It is a characteristic that provides a deep satisfaction in shared sacrifice. The Navy has accepted an explicit responsibility to ensure the safety of its young Sailors away from home for the first time. The Navy and its leaders have an implicit obligation to provide all hands with the opportunity to achieve their potential, to prosper, to advance, and to truly make a difference while protecting America.

The Navy must provide ample opportunities for every Sailor to grow and prosper. We have presented and discussed many of these issues earlier in the report, but to put them in context here, Navy leaders must:

- Be responsible for their own and their subordinates’ professional development
- Ensure that training is focused and relevant
- Aggressively eliminate “human wastage”
- Encourage personal development
- Understand and capitalize on their subordinates’ strengths
- Allow an equitable work/life balance
- Provide acceptable work environment
- Balance resources and requirements, and eliminate “message mismatches.”

Demonstrated Commitment to Learning

The Navy must demonstrate tangibly, both by action and allocation of resources, that it values training and education. It has been said that for much of the Navy, “If we’re not actually in combat, everything we do is training.” While this is true, Sailors must also learn and improve their performance in combat—perhaps even more so.

This principle is simple—the Navy must remove the “message mismatches” we heard about so frequently during our Sailor interviews. If training and education are truly important, the Navy must balance resources and requirements. Our report has identified several specific actions that will demonstrate a commitment to learning on the Navy’s part:

- Align all training components, facilities, and functions

- Avoid “just in time” or “just in case” training
- Recognize and value Sailor education
- Provide appropriate logistics support; maintain training tools in working condition
- Maximize human performance in acquisition
- Aggressively identify, adopt, and exploit “best training practices”
- Design the optimum solutions and media for the given human-performance requirement
- Assign really good Officer and Enlisted Sailors to training jobs
- Value and reward instructors.

Navy Learning Strategy

The Navy must adopt a learning strategy. We recommend this strategy be based on human performance analysis. It must be the same everywhere in the Navy, for all warfare communities, for all tasks and skills. As discussed in the HPSM, all job requirements should be reviewed and defined by competencies (knowledge, skills, and abilities—KSAs). Training objectives and delivery must be based on KSAs. This end-to-end relationship must extend all the way from the individual to the unit to the group. Having an overarching strategy will significantly alter the way the Navy conducts training today since the focus will be on improving individual skill/job task performance. We feel the Navy Learning Strategy will be manifest in the following actions:

- Implementation of the 4-quadrant Human Performance System Model
- Adoption of the Navy Learning Model
- Embracing the science of learning
- Developing objective, performance-based metrics (levels 1-4) at the individual, unit, and group levels
- Training at locations closer to the waterfront and flight line
- Use of blended training solutions, with different levels of expected performance.

Empowered Individual Learner

The Navy must encourage individuals to be responsible for their own personal and professional development. Individual Sailors must help manage their careers. This requires a significant change in the Navy’s reward and incentive programs.

Empowering the learner involves ceding some control to Sailors. It is not an issue of simply mandating minimum hours per week in training; it is enabling and rewarding individual learning. It is about providing pervasive access to learning tools and encouraging their use. As seen during our discovery phase, the vast technology infusion associated with NMCI, IT-21, and the internet will fundamentally alter knowledge management hierarchies in the Navy. Information will flow much more openly, fundamentally altering both individual and command relationships.

The following characteristics would define an “empowered individual learner”:

- Personal responsibility for growth and learning

- Creative participation
- Achieving growing proficiency
- Living in a continual learning mode.

Career Progression

The learning continuum affects each phase of the Sailor's career differently. Our discovery efforts highlighted several new technological applications that were not available even a few years ago. In this section we highlight some of the tools that we feel would play a significant role in improving a Sailor's career. We present the Enlisted Sailor's career in five phases: Sailorization (which includes recruiting, DEP, and boot camp), apprentice, journeyman, master, and post-Navy phase.

Sailorization (Recruiting, DEP, & Boot Camp) Phase

The continuum starts with the recruiting/DEP phase of a Sailor's career (figure 43)—a phase in which the Navy has traditionally spent little in terms of education and training.

We recommend the Navy improve the Sailor/rating match. The process must begin with a whole-person assessment that encompasses knowledge and academic abilities, preferences, interests, and current skills. A better match between Sailors' interests and abilities and their ratings will lead to

much greater satisfaction and improved performance. Ultimately, improved matches may reduce attrition and enhance retention.

The Navy has difficulty recruiting people who already are trained. The Navy does not assess the person's skills against Navy training requirements. For example, individuals who enter with an associate's degree in electronics technology start at the same place in the Navy's electronics technician training pipeline as an untrained high school graduate. In these cases, the

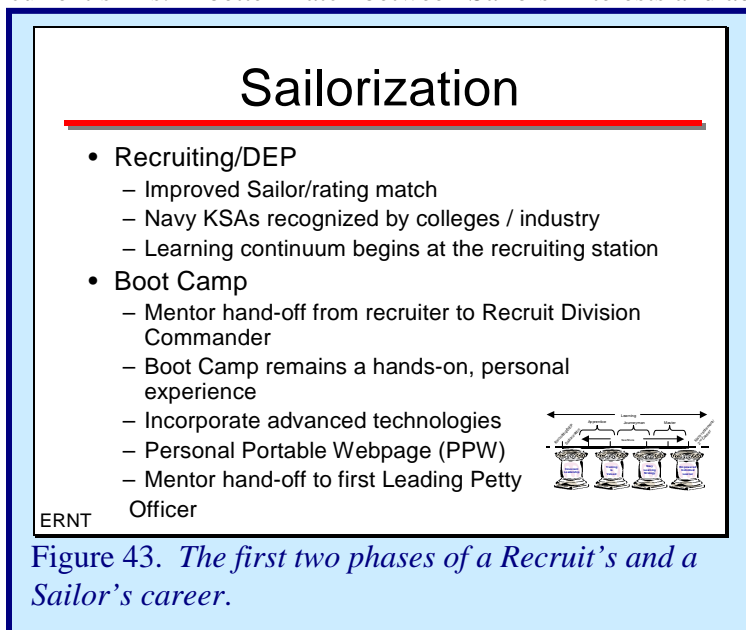


Figure 43. *The first two phases of a Recruit's and a Sailor's career.*

Navy pays for training the individual does not need or want. When jobs are based on KSAs and paired with people in whole-person assessments, the Navy will benefit from the direct correlation of civilian competencies with Navy training requirements. This will produce better rating matches while removing unnecessary and redundant training. If Sailors are to believe that training is important and valued, they must see that *all* training has value, especially the training they have worked to get on their own.

We also propose that the Navy expand learning opportunities for those in the Delayed Entry Program (beyond the PQS standards that currently exist). For instance, by making use of the Internet to offer eLearning, DEPers could begin orientation, academic, and technical training

before going on active duty. CNA has been conducting an experiment with an internet-based DEP program that allows DEPers to learn PQS material and to take tests on their own time and at their own pace. These learning opportunities appear to have been productive.

We believe that it is important for mentoring to become an integral part of everyone's job. In this spirit, the recruiter (the Sailor's first mentor) should hand off the recruit to the Recruit Division Commander (RDC) at boot camp. The world-wide web can provide the forum for these transfers of responsibility. Ultimately, using web-based sites such as cyber-DEP, an RDC will be able to chat with each of his or her recruits before they ever ship to boot camp. Recruiters will continue to chat with Recruits in training at RTC. This has the potential to reduce attrition and to enhance the entire boot camp experience.

Upon arriving at boot camp, Recruits will be provided with a Personal Portable Webpage (PPW)—a web page that acts as a professional portfolio and educational portal. The PPW will include an individual's training history, educational transcripts, past and current assignments, important e-mail addresses, bookmarks to important web pages, links to eLearning, and so on. In terms of career enhancement, the PPW will be populated by the personal career plan and the learning plan for each new Sailor and will be developed and updated at important career milestones with the Sailor's supervisor/mentor. At each mentor handoff, the Sailor's PPW will also be updated with information concerning recent duty, accomplishments, training, and so on, and a learning plan revised for the Sailor and his or her next mentor to use as a reference. The PPW is similar in concept to the personalized Webpages provided through many Internet service providers, such as My Yahoo or My Lycos.

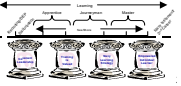
Apprentice Phase

We envision the apprentice phase of a Sailor's career to be much more targeted, tailored, and streamlined (figure 44). It will allow for assessing Sailors' KSAs before training begins, and inserting them in the right place in the training continuum. Sailors will have much greater opportunities to learn at their own pace, and to take much greater ownership of their learning process. We also believe strongly that all Enlisted Sailors should achieve basic skill levels in reading, writing, mathematics, and life skills before leaving the apprentice phase.

As depicted in figure 44, the focus here is on capitalizing on training improvements. Consequently, Sailors' skills must be put to good use. All training needs to be directly correlated to job assignments. That is why the Revolution must extend beyond training to incorporate job

Apprentice Phase

- Initial Skills Training
 - HPSC recommends optimum delivery strategy
 - Targeted, Tailored, Streamlined
 - Eliminate training redundancies and irrelevancies
 - Reduced time-to-train
 - Improved detailing: KSAs will enhance Sailor/job fit
- Must utilize skills immediately
 - Avoid TAD (FSA, FP, MAA, Waste Management)
 - "Ask the Chief"
- Exams and warfare qualifications will test knowledge and performance
- Greater cross-rating opportunities



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assignments. We recommend strongly that such TAD assignments as Food Service Attendant duties, be ended as soon as possible.

One of the top reasons why employees leave companies is the lack of career development. Above all, they value training and education, and desire challenging and rewarding jobs that utilize their skills. TAD assignments run

Figure 44. *Apprentice phase.*

counter to this goal. The science of learning has shown that skills put to use immediately after initial learning are cemented and retained best. Skills that languish during TAD assignments are degraded through disuse.

We also recommend that major changes in the rating exam and warfare qualification processes occur. Specifically, we suggest the evaluation process be based on both the Sailor's knowledge *and* performance, and involve simulators, virtual reality programs, and web-based applications. We recommend that assessment of job performance be the dominant determinant of eligibility to advance.

We believe that a KSA-based training and requirements system will facilitate a Sailor's opportunities to change ratings. Evaluating a Sailor's KSAs may allow Sailors to change ratings without having to complete the entire curriculum for the new rating. Sailors should be able to initiate a shift in rating by learning much of what is needed for the new rating. Then, the Sailor can be trained only in the new skills, and the Navy will save training time and money.

Technology offers a tremendous tool to develop esprit-de-corps and professional expertise in common skill areas. We recommend an "Ask the Chief" website be established as soon as possible. This application could be modeled after "Ask Jeeves" (www.ask.com)—a knowledge management website that allows the user to type in a question and submit it to anyone using the site to answer. Answers are rated on feedback from users, and a respondent becomes ranked over time by peers. We suggest that such a tool could be invaluable in capitalizing on the trust and compounding the knowledge within the Navy.

Journeyman Phase

During this phase, advanced skills/knowledge will be acquired both on shore and at sea (figure 45). The goal is to build upon basic competencies, with Sailors setting their own pace. Intelligent, motivated, and competent Sailors should accelerate, from the career perspective, away from their less motivated peers. This cannot occur in today's personnel and distribution system.

We believe Enlisted Sailors should strive for associate's degrees (or higher) during the journeyman phase. They should be able to combine credits earned from formal Navy technical training with credits earned while attending a compressed curriculum program to do so. Certification as a journeyman in a civilian occupational field is also an appropriate aspiration.

We also recommend the Navy develop a "Sea-Duty Instructor" program. These instructors could assist the unit's Chief Learning Officer (the Executive Officer) in the management, coordination, delivery, and assessment of command training. This process would provide a cadre of trainers who would be able to assist in

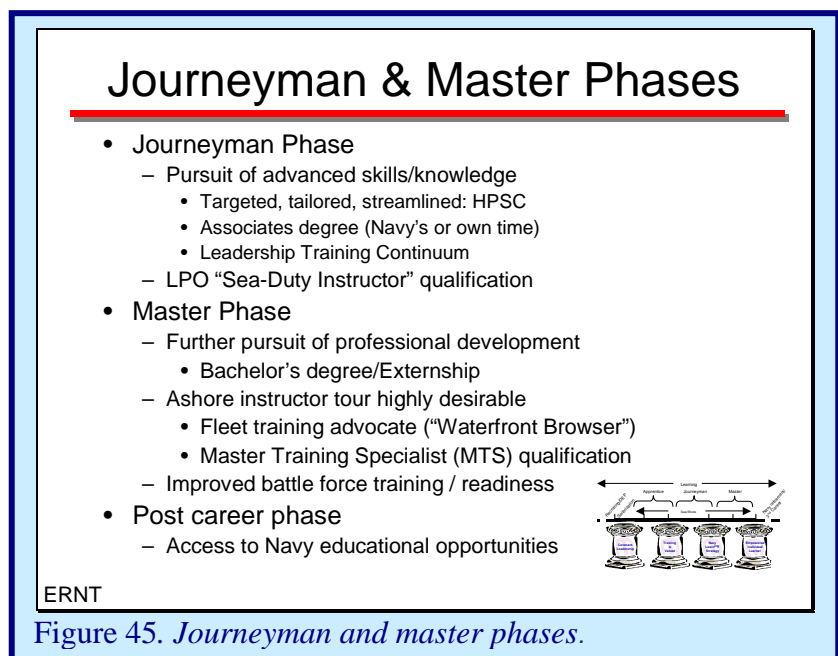


Figure 45. *Journeyman and master phases.*

administering meaningful shipboard training. It would replace “reading the manual to the division” type training with relevant and engaging training.

Master Phase

The master phase will provide additional opportunities for personal and professional growth—including college, graduate, and/or professional education (again, see figure 45). These Sailors’ educational experiences will improve productivity and retention. The concept of “externship” also deserves attention and should be explored. Externships, in our conception, would give a select group of Enlisted Sailors the opportunity to work side by side with their corporate counterparts, while pursuing industry certifications.

The Master Training Specialist designation should also be credited as the superior achievement the Navy needs it to be. This program must continue to develop superior trainers and should be extended from shore to all types of duty. The program could be further enhanced by specialized training in distributed learning and could conceivably lead toward civilian teaching certification. Master Training Specialists could be sent to major commands and staffs, like COMTHIRDFLT, COMPHIBGRU 3, or Battle Group/ARG staffs.

So at this point, if we were to review our “Master” Sailor’s PPW, we would find a complete and impressive list of warfare qualifications, training certifications, and education degrees earned over the course of his or her career. On the PPW would also be the personalized Learning Plan, which has been constantly reviewed and updated by the Sailor and a long list of mentors—from his/her recruiter all the way up to Command Master Chief and Chief Learning Officer.

Post-Navy Career Phase

The lifelong learning should not stop at retirement from the Navy (figure 46). The retiree would retain his or her Personal Portable Webpage and access to the Navy eLearning network. Most

importantly, this transition to the civilian workplace will be enhanced by the Navy’s adoption of KSAs. This will allow Sailors to match their Navy skills with civilian jobs.

Retirees would be tied more closely to the Navy, even as they went about their post-Navy activities. Following a successful career, Sailors who are well-informed can be effective emissaries. In addition, retirees can still contribute to the body of Navy knowledge and leadership if they still have Navy learning and

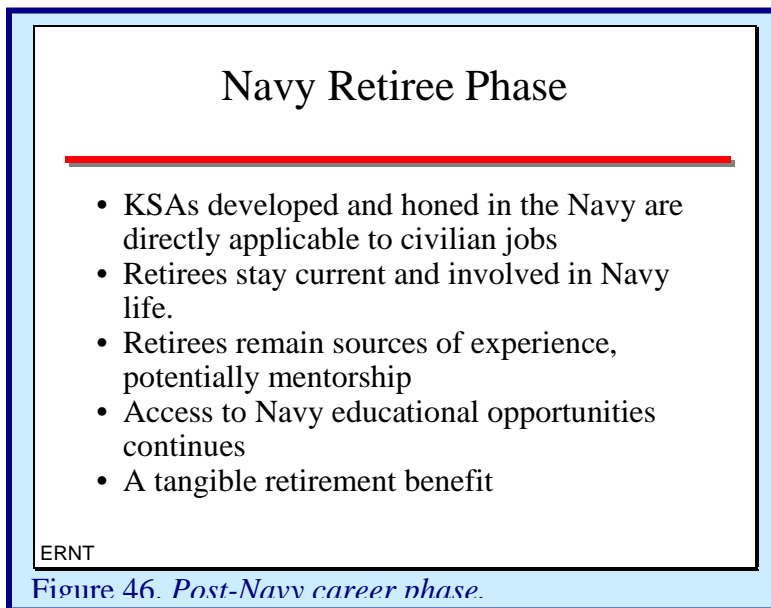


Figure 46. *Post-Navy career phase.*

communications means at their disposal.

If the Revolution in Training lives up to its potential, Sailors will consider (real) lifelong access, for themselves and for family members, to be a tangible benefit of service.